
DEPARTMENT OF THE ARMY 01561.TD
U.S. ARMY CORPS OF ENGINEERS -----

GUIDE SPECIFICATION FOR MILITARY CONSTRUCTION

NOTE: This section should be used for both Military
and Civil jobs.

It was last modified by S. Walters in April 2001.
New paragraphs were added pertaining to
compatibility on chemical storage (paragraphs
1.4.1.20 and 1.4.1.21)

SECTION 01561

ENVIRONMENTAL PROTECTION

NOTE: This Guide Specification covers the
requirements for environmental protection and for
the prevention of environmental pollution and damage
as the result of construction operations. This
section is in addition to those measures set forth
in other sections of these Technical
Specifications. This guide specification is an
updated SPECSINTACT version of the original guide
specification dated July 1978.

PART 1 GENERAL

NOTE: See Additional Note A.

1.1 REFERENCES

The publications listed below form a part of this specification to the
extent referenced. The publications are referred to in the text by basic
designation only.

CODE OF FEDERAL REGULATIONS (CFR)

40 CFR 262

Subpart D, Recordkeeping and Reporting

ENVIRONMENTAL PROTECTION AGENCY (EPA)

EPAPUB

(1992) NPDES (National Pollution Discharge
Elimination System) General Permits

for Storm Water Discharges from
Construction Sites

OKLAHOMA DEPARTMENT OF ENVIRONMENTAL QUALITY (DEQ)

GP-005A

General Permit 005A

OPDES

Oklahoma Pollutant Discharge Elimination
System

1.2 DEFINITIONS

For the purpose of this specification, environmental pollution and damage is defined as the presence of chemical, physical, or biological elements or agents which adversely affect human health or welfare; unfavorably alter ecological balances of importance to human life; affect other species of importance to man; or degrade the utility of the environment for aesthetic, cultural and/or historical purposes. The control of environmental pollution and damage requires consideration of air, water, and land, and includes management of visual aesthetics, noise, solid waste, radiant energy and radioactive materials, as well as other pollutants.

1.3 SUBMITTALS

NOTE: Submittals must be limited to those necessary for adequate quality control. The importance of an item in the project should be one of the primary factors in determining if a submittal for the item should be required.

Indicate submittal classification in the blank space following the name of the item requiring the submittal by using "G" when the submittal requires Government approval. Submittals not classified as "G" will show on the submittal register as "Information Only". For submittals requiring Government approval, a code of up to three characters should be used following the "G" designation to indicate the approving authority; codes of "RE" for Resident Engineer approval, "ED" for Engineering approval, and "AE" for Architect-Engineer approval are recommended.

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only. When used, a designation following the "G" designation identifies the office that will review the submittal for the Government. The following shall be submitted in accordance with Section 01330 SUBMITTAL PROCEDURES:

SD-01 Preconstruction Submittals

Environmental Protection Plan; G, [_____].

The environmental protection plan shall address all items in the paragraph ENVIRONMENTAL PROTECTION REQUIREMENTS and shall be submitted with the

Quality control Plan as described in Section 01440.

**NOTE: DELETE THE POLLUTION PREVENTION PLAN IF THE
AREA THAT WILL BE DISTURBED IS NOT GREATER THAN 5
ACRES.**

Pollution Prevention Plan (SWP₃); G, [_____].

The pollution prevention plan (SWP₃) shall address all items in the paragraph STORM WATER POLLUTION PREVENTION PLANS. The plan shall be submitted and approved prior to the beginning of construction.

**NOTE: DELETE THE WASTE MANAGEMENT PLAN IF THIS IS
NOT FOR A HTRW PROJECT.**

Waste Management Plan; G, [_____].

The waste management plan shall address the waste stream, estimated quantities of waste, describe and tentatively classify the broad waste types anticipated such as; hazardous waste (with an EPA waste code); solid waste; medical waste; radioactive waste; mixed hazardous/radioactive waste; and other special waste. The rationale for assignment of waste to these broad waste categories shall be provided.

1.4 ENVIRONMENTAL PROTECTION REQUIREMENTS

Provide and maintain, during the life of the contract, environmental protection. Plan for and provide environmental protective measures to control pollution that develops during normal construction practice. Plan for and provide environmental protective measures required to correct conditions that develop during the construction of permanent or temporary environmental features associated with the project. Comply with Federal, State, and local regulations pertaining to the environment, including but not limited to water, air, and noise pollution.

1.4.1 Environmental Protection Plan

Within 15 days after receipt of Notice of Award of the contract and at least 7 days prior to the Preconstruction Conference, the Contractor shall submit in writing, with drawings, an Environmental Protection Plan and meet with representatives of the Contracting Officer to develop mutual understanding relative to compliance with this provision and administration of the environmental protection program. Approval of the Contractor's plan will not relieve the Contractor of his responsibility for adequate and continuing control of pollutants and other environmental protection measures. The Government reserves the right to make changes in his environmental protection plan and operations as necessary to maintain satisfactory environmental protection performance. The environmental protection plan shall include but not be limited to the following:

1.4.1.1 Laws, Regulations, and Permits

NOTE: Delete the information in the first set of

brackets if a PPP is not required.

[Except for a Notice of Intent (NOI) required for obtaining a permit for storm water discharge which will be obtained by the Corps of Engineers, the][The] Contractor shall prepare a list of Federal, State and local laws, regulations, and permits concerning environmental protection, pollution control and abatement that are applicable to the Contractor's proposed operations and the requirements imposed by those laws, regulations and permits.

1.4.1.2 Protection of Features

The Contractor shall determine methods for the protection of features to be preserved within authorized work areas. The Contractor shall prepare a listing of methods to protect resources needing protection, i.e., trees, shrubs, vines, grasses and ground cover, landscape features, air and water quality, fish and wildlife, soil, historical, archaeological and cultural resources.

1.4.1.3 Procedures

The Contractor shall implement procedures to provide the required environmental protection and to comply with the applicable laws and regulations. The Contractor shall set out the procedures to be followed to correct pollution of the environment due to accident, natural causes or failure to follow the procedures set out in accordance with the environmental protection plan.

1.4.1.4 Permit or License

The Contractor shall obtain all needed permits or licenses for disposal of solid, liquid, chemical, and other waste generated as a result of this contract.

1.4.1.5 Drawings

The Contractor shall include drawings showing locations of any proposed temporary excavations or embankments for haul roads, stream crossings, material storage areas, structures, sanitary facilities, stockpiles of earth materials, and disposal areas for excess earth material and unsatisfactory earth materials.

1.4.1.6 Environmental Monitoring Plans

The Contractor shall include environmental monitoring plans for the job site which incorporate land, water, air and noise monitoring.

1.4.1.7 Traffic Control Plan

The Contractor shall include a traffic control plan for the job site.

1.4.1.8 Surface and Ground Water

The Contractor shall establish methods of protecting surface and ground water during construction activities.

1.4.1.9 Work Area Plan

The Contractor shall include a work area plan showing the proposed activity in each portion of the area and identifying the areas of limited use or nonuse. The plan shall include measures for marking the limits of use areas.

1.4.1.10 Plan of Borrow Area(s)

The Contractor shall include a plan of borrow area(s) for the job site.

1.4.1.11 Method of Marking Clearing Limits

The Contractor shall include the method of marking and maintaining markings for limits of clearing.

1.4.1.12 Method of Controlling Equipment

The Contractor shall include a plan of the method for controlling equipment maneuvering to avoid environmental damage.

1.4.1.13 Training of Contractor's Personnel

The Contractor shall include a plan for training and control of his personnel for environmental damage.

1.4.1.14 Prevention and Control of Spillage

The Contractor shall include a plan for prevention and control of damaging spillages.

1.4.1.15 Layout of Work Areas and Other Areas

The Contractor shall include a plan of his method for layout of work areas, plant sites, haul roads, and borrow and waste areas.

1.4.1.16 Method and Location of Waste and Debris Disposal

The Contractor shall include the location for disposal of waste and debris.

1.4.1.17 Preplanning

Meetings of the Contractor with Contracting Officer or his authorized representative as specified in the paragraph MEETINGS, for the purpose of preplanning prevention of environmental damage.

1.4.1.18 Proposed Schedule for Training of Contractor Personnel

The Contractor shall include a schedule of proposed meetings to be attended by all Contractor personnel for the purpose of training for environmental protection with a Contracting Officer's representative present at appropriate intervals. Sufficient length of time to accomplish the purpose shall be included.

1.4.1.19 Method of Training

The Contractor shall include a proposed method of training all new

employees in environmental protection before they commence working project.

**NOTE: DELETE THE FOLLOWING PARAGRAPH IF A STORM
WATER POLLUTION PREVENTION PLAN (PPP) IS NOT
REQUIRED. A PPP IS REQUIRED IF THE CONSTRUCTION
WILL DISTURB AN AREA OR 5 ACRES OR GREATER. A PPP
IS NOT NORMALLY REQUIRED FOR ROADWAY RESURFACING.
CONTACT JIM MARTELL IN GEOTECH BRANCH AT 669-7171
FOR FURTHER ADVICE ON WHEN A PPP IS REQUIRED.**

1.4.1.20 Material Storage

Contractor shall provide a list sorting and identifying by chemical compatibility those materials to be used for the project. This information will be included in the EPP (Environmental Protection Plan) and will be updated periodically to insure all materials are included. It will be used to insure that incompatible chemicals are not stored together.

1.4.1.21 Material Safety Data Sheets (MSDS)

MSDS forms shall be on file prior to use of listed chemicals.

1.5 STORM WATER POLLUTION PREVENTION PLANS (SWP₃)

The Contractor shall prepare a Storm Water Pollution Prevention Plan (SWP₃) for the construction activity. This plan shall be in accordance with Oklahoma Department of Environmental Quality (DEQ) General Permit GP-005A and the Oklahoma Pollutant Discharge Elimination System Act (OPDES).

This plan shall be in accordance with EPAPUB NPDES General Permits for Storm Water Discharges from Construction Sites. The plan shall identify potential sources of pollution resulting from storm water discharge from the project site(s) and present methods for reducing or eliminating such discharge.

The Contracting Officer and the Contractor shall review the SWP₃ to determine the accuracy of the plan. The SWP₃ may be modified to insure that all current measures to prevent offsite migration of pollutants, including soils, are included in the plan.

1.5.1 Contents of the SWP₃

The SWP₃ shall include as a minimum:

(a) A narrative description of potential pollution sources for each construction site through a description of the nature of the construction activity;

(b) The intended phasing of construction activities related to soil disturbance and the storm water control measure proposed for that activity. For each storm water control measure proposed, the SWP₃ shall indicate when the measure will be implemented. Perimeter controls shall be actively maintained until final stabilization of that portion of the site upward of the perimeter control is established;

(c) Estimates of total acreage to be disturbed, estimates of the runoff coefficient of the site once construction is completed, and any existing soils data or discharge quality data;

(d) Site mapping detailing drainage patterns, slopes, major activities, location of structural controls such as hay bale barriers and the location of point sources;

(e) Storm water management controls appropriate for the project, including perimeter controls, and stabilization practices to be employed such as temporary grading to control runoff velocities, temporary seeding and mulching and permanent seeding and planting. For a common drainage location that serves an area of 5 2.02 or more disturbed acres hectares at one time, a sediment basin providing 3,600 cubic feet 102 cubic meters of storage per acre drained shall be provided. Equivalent control measures may be taken where attainable and after approval by the Contracting Officer;

(f) A description of maintenance procedures to be employed to minimize the offsite discharge of pollutants, and an inspection program to insure that the SWP₃ is effective, or if not, to insure that necessary changes to the plan are made and implemented in a timely manner;

(g) Identification for each storm water management measure set forth in the plan, the Contractor and/or subcontractor(s) that will implement such measure. Contractor and subcontractors identified in the SWP₃ shall sign a certification that they have reviewed the general permit as listed in the paragraph STORM WATER POLLUTION PREVENTION PLANS and understand the terms and conditions therein. All such certifications shall be included in the SWP₃, which is to be kept on the job side for inspection by EPA or state or local regulatory agencies;

(h) Plan for control of offsite vehicle tracking of soils. Contractor shall make every effort to keep soils onsite. This may be accomplished by including paved or graveled entrances, graveled and dedicated roadways, or vehicle wash stations.

**NOTE: DELETE THE FOLLOWING IF A WASTE MANAGEMENT
PLAN IS NOT REQUIRED. A WASTE MANAGEMENT PLAN WILL
BE REQUIRED FOR ANY PROJECTS THAT INVOLVE HTRW.**

1.6 WASTE MANAGEMENT PLAN

The Contractor shall prepare a Waste Management Plan for the Government's approval. The plan shall be submitted at least 30 days prior to generation of any materials planned for disposal. The plan shall include the following information:

a. Waste Streams and Anticipated Quantities to be Generated: The waste streams shall be estimated, described and tentatively classified into the broad waste types anticipated, such as: hazardous waste (with an EPA waste code); solid waste; medical waste; radioactive waste; mixed hazardous/radioactive waste or other special state waste. The rationale for the assignment of each specific waste type to these broad waste categories shall be provided.

b. Waste Segregation and Temporary Storage: The procedures to be used to segregate wastes of different specific waste types shall be discussed. The temporary storage or staging of these materials shall be discussed and the applicable regulations regarding quantity or time

limitations for storage of these materials, spill prevention and control, inspection procedures, container requirements or other required actions shall be referenced. The procedures to be used to insure compliance with these regulations shall be discussed.

c. Treatment, Storage, or Disposal Facilities Name and ID Number for the Anticipated Types of Waste: The type and concentration limits of waste the facility is licensed and permitted to accept shall be included. Copies of the portions of the facility permit authorizing the receipt of the specific waste types anticipated under this contract shall be provided.

d. Analytical/Physical testing required to dispose waste above and beyond that required in other sections of these specifications.

e. Transporters Name and ID Number proposed for use in transporting each specific waste type.

f. Waste container marking and labelling, transport vehicle placarding requirements for each specific waste type.

g. Paperwork Requirements for Disposal of Wastes: For hazardous wastes, the Contractor shall prepare the manifest; the Contracting Officer, Contracting Officer's Representative, or installation representative shall sign the manifest as the generator and shall supply the Generator ID number. Recordkeeping and reporting shall be in accordance with 40 CFR 262 Subpart D - Recordkeeping and Reporting. The generator and the Contracting Officer (if different individuals) shall be provided a copy of the manifest after accepted for transport by the transporter. The generator and the Contracting Officer shall also be provided a fully executed copy of the manifest after the waste has been received at the designated disposal or treatment facility. For non-hazardous wastes, the Contracting Officer shall be provided signed documentation from the disposal facility that the quantity and type of waste disposed from the project was accepted at the designated disposal facility.

1.7 MEETINGS

The Contractor shall meet with representatives of the Contracting Officer to develop mutual understanding relative to compliance with this section of the specifications and administration of the environment protection program. The Contractor shall be prepared to discuss the program in conferences convened by the Contracting Officer before starting work on each major phase of operation. Approval of the Contractor's plan for environmental protection will not relieve the Contractor of his responsibility for adequate and continuing control of pollutants and protection of environmental features. All Contractor personnel shall be required to attend.

1.8 SUBCONTRACTORS

Assurance of compliance with this section by subcontractors will be the responsibility of the Contractor.

**NOTE: DELETE THE FOLLOWING PARAGRAPH IF NO PERMITS
ARE OBTAINED BY THE CORPS OF ENGINEERS**

1.9 PERMITS OBTAINED BY CORPS OF ENGINEERS

The Contractor shall comply with all requirements under the terms and conditions set out in the following permit(s), which will be obtained by the Corps of Engineers.

1.10 REGULATORY REQUIREMENTS

The Contractor shall comply with all federal, state, and local regulatory and statutory requirements.

PART 2 PRODUCTS (NOT APPLICABLE)

PART 3 EXECUTION

3.1 PROTECTION OF ENVIRONMENTAL RESOURCES

The environmental resources within the project boundaries and those affected outside the limits of permanent work under this contract shall be protected during the entire period of this contract. The Contractor shall confine his activities to areas defined by the contract drawings or specifications. Environmental protection shall be as stated in the following subparagraphs.

3.1.1 Protection of Land Resources

Prior to the beginning of any construction, the Contracting Officer will identify all land resources to be preserved within the Contractor's work area. The Contractor shall not remove, cut, deface, injure, or destroy land resources including trees, shrubs, vines, grasses, topsoil, and land forms without special permission from the Contracting Officer. No ropes, cables, or guys shall be fastened to or attached to any trees for anchorage unless specifically authorized. Where such special emergency use is permitted, the Contractor shall provide effective protection for land and vegetation resources at all times as defined in the following subparagraphs.

3.1.1.1 Work Area Limits

Prior to any construction, the Contractor shall mark the areas where no work is to be performed under this contract. Isolated areas within the general work area which are to be saved and protected shall also be marked or fenced. Monuments and markers shall be protected before construction operations commence and during all construction operations. Where construction operations are to be conducted during darkness, the markers shall be visible during darkness. The Contractor shall convey to his personnel the purpose of marking and/or protection of all necessary objects.

3.1.1.2 Protection of Landscape

Trees, shrubs, vines, grasses, land forms and other landscape features to be preserved, indicated and defined on the drawings submitted by the Contractor as a part of the Environmental Protection Plan, shall be clearly identified by marking, fencing, or wrapping with boards, or any other approved techniques.

3.1.1.3 Reduction of Exposure of Unprotected Erodible Soils

Earthwork brought to final grade shall be finished as indicated and specified. Side slopes and back slopes shall be protected as soon as practicable upon completion of rough grading. All earthwork shall be planned and conducted to minimize the duration of exposure of unprotected soils. Except in instances where the constructed feature obscures borrow areas, quarries and waste material areas, these areas shall not initially be cleared in total. Clearing of such areas shall progress in reasonably sized increments as needed to use the areas developed as approved by the Contracting Officer.

3.1.1.4 Temporary Protection of Disturbed Areas

Such methods as necessary shall be utilized to effectively prevent erosion and control sedimentation, including but not limited to the following:

a. Retardation and Control of Runoff

Runoff from the construction site shall be controlled by construction of diversion ditches, benches, and berms to retard and divert runoff to protected drainage courses, and the Contractor shall also utilize any measures required by area-wide plans approved under Paragraph 208 of the Clean Water Act.

b. Sediment Basins

NOTE: The design year storm is determined by the downstream environment to be protected. An estimate of damage to the downstream environment versus the design year storm that will cause this level of damage should be made and the appropriate protection implemented. In the event permanent sediment basins are necessary for the particular project, these permanent facilities shall be included in the project design and the contract documents; if permanent basins are not required, delete reference thereto.

Sediment from construction areas shall be trapped in temporary or permanent sediment basins in accordance with basin plans shown on the contract drawings [and in accordance with the paragraph: STORM WATER POLLUTION PREVENTION PLANS.]. The Contractor shall institute effluent quality monitoring programs as required by state and local environmental agencies.

3.1.1.5 Erosion and Sedimentation Control Devices.

The Contractor shall construct or install all temporary and permanent erosion sedimentation control features as indicated on the contract drawings. Temporary erosion and sediment control measures such as berms, dikes, drains, sedimentation basins, grassing and mulching shall be maintained until permanent drainage and erosion control facilities are completed and operative.

*

NOTE: Delete the following paragraph if a Pollution Prevention Plan is not required.

3.1.1.6 Stabilization of Disturbed Soils

Stabilization measures of areas involved in the SWP, shall be initiated on disturbed areas as soon as practicable, but no more than 14 days after the construction activity on a particular portion of the site has temporarily or permanently ceased except as follows:

(a) where construction activities will resume on a portion of the site within 21 days from the time when construction activities temporarily ceased;

(b) where the initiation of the stabilization measure is precluded by snow cover in which case stabilization measures shall be initiated as soon thereafter as practicable.

3.1.1.7 Inspections

Weekly inspections of construction sites shall be conducted by the Contractor to insure that the various controls and components of the various plans required by this section are in place. In addition, the Contractor shall make an inspection within 24 hours following a 1/2 inch 12 mm or greater rainfall event to insure that the controls are working adequately and have not been impacted by the rainfall event.

3.1.1.8 Location of Contractor Facilities

The Contractor's field offices, staging areas, stockpiles, storage, and temporary buildings shall be placed in areas designated on the contract drawings and approved by the Contracting Officer. Temporary movement or relocation of Contractor facilities shall be made only on approval by the Contracting Officer.

3.1.1.9 Borrow Areas on Government Property

Borrow areas on government property shall be managed to minimize erosion and to prevent sediment from entering nearby water courses or lakes.

3.1.1.10 Disposal Areas on Government Property

Disposal areas on Government property shall be managed and controlled to limit material to areas designated on the contract drawings and prevent erosion of soil or sediment from entering nearby water courses or lakes. Disposal areas shall be developed in accordance with the grading plan indicated on the contract drawings.

3.1.1.11 Temporary Excavation and Embankments

Temporary excavation and embankments shall be controlled to protect adjacent areas from contamination.

3.1.1.12 Disposal of Solid Wastes

NOTE: Use Alternate 1 if a Waste Management Plan (HTRW Solicitations) is required. Use Alternate 2 if no Waste Management Plan is required and select appropriate disposal alternative.

ALTERNATE 1. USE IF WASTE MANAGEMENT PLAN IS REQUIRED.

All waste shall be disposed of in accordance with the approved Waste Management Plan.

ALTERNATE 2. USE IF NO WASTE MANAGEMENT PLAN IS REQUIRED.

Solid wastes (excluding clearing debris) shall be placed in containers which are emptied on a regular schedule. All handling and disposal shall be conducted to prevent contamination. [The Contractor shall transport all solid waste off Government property and dispose of it in compliance with Federal, State, and local requirements for solid waste disposal.] [Waste materials shall be hauled to the Government landfill site shown on the contract drawings. The Contractor shall comply with State and local regulations pertaining to the use of landfill areas.]

3.1.1.13 Disposal of Chemical Wastes

Chemical wastes shall be stored in corrosion resistant containers, removed from the work area and disposed of in accordance with Federal, State, and local regulations.

3.1.1.14 Disposal of Discarded Materials

Discarded materials other than those which can be included in the solid waste category shall be handled as directed by the Contracting Officer.

USE THE FOLLOWING ADDITIONAL PARAGRAPH FOR FT. SILL PROJECTS ONLY

3.1.1.15 Disposal of Materials at Ft. Sill

Disposal of trash, garbage, or domestic waste shall be in the Ft. Sill Post Sanitary Landfill. Demolition rubble shall be disposed of in the Ft. Sill rubble pit. Disposal of metals shall be the responsibility of the Contractor off Government Property. Disposal of Contractor produced POL products, chemicals, or other hazardous or toxic compounds shall be in accordance with Ft. Sill Regulation USAFACFS Regulation 200-2. The Contracting Officer shall be advised of the type of Contractor produced POL products, chemicals, or other hazardous or toxic compounds and the amount of these products. The Contracting Officer will determine the methods of disposal of these products and such actions may require EPA or State permits.

3.2 HISTORICAL, ARCHAEOLOGICAL AND CULTURAL RESOURCES

Existing historical, archaeological and cultural resources within the Contractor's work area will be so designated by the Contracting Officer and precautions shall be taken by the Contractor to preserve all such resources as they existed at the time they were pointed out to the Contractor. The Contractor shall install all protective devices such as off-limit markings, fencing, barricades, or other devices deemed necessary by the Contracting Officer for these resources so designated on the contract drawings and shall be responsible for their preservation during this contract. If during construction items of apparent archaeological or historical interest are discovered, they shall be left undisturbed and the Contractor shall report the find immediately to the Contracting Officer.

3.3 PROTECTION OF WATER RESOURCES

NOTE: Specify additional operations unique to this contract after paragraph below entitled "MONITORING OF WATER AREAS AFFECTED BY CONSTRUCTION ACTIVITIES".

The Contractor shall keep construction activities under surveillance, management and control to avoid pollution of surface and ground waters. Special management techniques as set out below shall be implemented to control water pollution by the listed construction activities which are included in this contract.

3.3.1 Washing and Curing Water

NOTE: Insert name(s) of process producing the wastewater.

Waste waters directly derived from [____], [____], and [____] construction activities shall not be allowed to enter water areas. These waste waters shall be collected and placed in retention ponds where the suspended materials can be settled out or the water evaporated in order to separate the pollutants from the water.

3.3.2 Cofferdam and Diversion Operations

NOTE: Insert name(s) of Water Areas.

The Contractor shall plan his operations and perform all work necessary to minimize adverse impact or violation of the water quality standard for [____], [____]. Construction operations for dewatering, removal of cofferdams, tailrace excavation, and tunnel closure shall be controlled at all times to limit impact of water turbidity on the habitat for wildlife and impacts on water quality for downstream use.

3.3.3 Stream Crossings

Stream crossings shall be controlled during construction. Crossings shall provide movement of materials or equipment which do not violate water pollution control standards of the Federal, State or local government.

3.3.4 Monitoring of Water Areas Affected by Construction Activities

Monitoring of water areas affected by construction activities shall be the responsibility of the Contractor. All water areas affected by construction activities shall be monitored by the Contractor.

3.4 PROTECTION OF FISH AND WILDLIFE RESOURCES

The Contractor shall keep construction activities under surveillance, management and control to minimize interference with, disturbance to and damage of fish and wildlife. Species that require specific attention along with measures for their protection shall be listed by the Contractor prior to beginning of construction operations.

3.5 PROTECTION OF AIR RESOURCES

**NOTE: Insert name of state and title of state air
pollution statute, rule or regulation, if known.**

The Contractor shall keep construction activities under surveillance, management and control to minimize pollution of air resources. All activities, equipment, processes, and work operated or performed by the Contractor in accomplishing the specified construction shall be in strict accordance with all Federal and State of [_____] emission and performance laws and standards. Special management techniques as set out below shall be implemented to control air pollution by the construction activities which are included in the contract.

3.5.1 Particulates

Dust particles, aerosols, and gaseous by-products from all construction activities, processing and preparation of materials, such as from asphaltic batch plants, shall be controlled at all times, including weekends, holidays and hours when work is not in progress. The Contractor shall maintain all excavations, stockpiles, haul roads, permanent and temporary access roads, plant sites, spoil areas, borrow areas, and all other work areas within or outside the project boundaries free from particulates which would cause the air pollution standards mentioned in the paragraph "PROTECTION OF AIR RESOURCES" to be exceeded or which would cause a hazard or a nuisance. Sprinkling, chemical treatment of an approved type, light bituminous treatment, baghouse, scrubbers, electrostatic precipitators or other methods will be permitted to control particulates in the work area. Sprinkling, to be efficient, must be repeated at such intervals as to keep the disturbed area damp at all times. The Contractor must have sufficient competent equipment available to accomplish this task. Particulate control shall be performed as the work proceeds and whenever a particulate nuisance or hazard occurs.

3.5.2 Hydrocarbons and Carbon Monoxide

Hydrocarbons and carbon monoxide emissions from equipment shall be controlled to Federal and State allowable limits at all times.

3.5.3 Odors

Odors shall be controlled at all times for all construction activities, processing and preparation of materials.

3.5.4 Monitoring Air Quality

Monitoring of air quality shall be the responsibility of the Contractor. All air areas affected by the construction activities shall be monitored by the Contractor.

3.6 TESTS

The Contractor shall establish and maintain quality control for environmental protection operations to assure compliance with contract requirements and maintain records of his quality control for all construction operations, including, but not limited to the following items. The Contractor shall record on daily reports any problems in complying with laws, regulations and ordinances and corrective action taken. Three copies of these records and tests, as well as the records of corrective action taken, shall be furnished the Government as directed by the Contracting Officer.

3.6.1 Laws, Regulations and Ordinances

The Contractor must comply with all Federal, State, and local laws, regulations and ordinances concerning pollution control.

3.6.2 Protection of Land Resources

The Contractor shall prevent landscape defacement and provide post-construction clean-up.

3.6.3 Protection of Water Resources

The Contractor shall prevent the contamination of lakes, ditches, or other bodies of water with harmful chemicals; the Contractor shall dispose of waste materials; and the Contractor shall provide erosion control.

3.6.4 Pollution Control Facilities

The Contractor shall provide for the maintenance of pollution control facilities. The Contractor shall conduct a training course on the maintenance of pollution control facilities.

3.7 INSPECTION

The Contracting Officer will notify the Contractor in writing of any observed noncompliance with any of the Contractor's required plans. The Contractor shall, after receipt of such notice, inform the Contracting Officer of proposed corrective action and take such action as may be approved. If the Contractor fails to comply promptly, the Contracting Officer may issue an order stopping all or part of the work until satisfactory corrective action has been taken. No time extensions will be

granted or costs or damages allowed to the Contractor for any such suspension.

3.8 POST CONSTRUCTION CLEANUP

The Contractor shall clean up all area(s) used for construction.

3.9 RESTORATION OF LANDSCAPE DAMAGE

The Contractor shall restore all landscape features damaged or destroyed during construction operations outside the limits of the approved work areas. Such restoration shall be in accordance with the plans submitted for approval by the Contracting Officer.

3.10 MAINTENANCE OF POLLUTION FACILITIES

The Contractor shall maintain all constructed facilities and temporary pollution control devices for the duration of the contract or for that length of time construction activities create the particular pollutant.

3.11 TRAINING OF CONTRACTOR PERSONNEL IN POLLUTION CONTROL

The Contractor shall train his personnel in all phases of environmental protection. The training shall include methods of detecting and avoiding pollution, familiarization with pollution standards, both statutory and contractual, and installation and care of facilities (vegetative covers and instruments required for monitoring purposes) to insure adequate and continuous environmental pollution control.

3.12 RECORD KEEPING

During construction, all records shall be retained onsite. Inspection reports and modifications of the plans required shall be retained for 3 years following construction.

NOTE: Use the following paragraph for all Altus projects. Per Ltr from Altus.

3.13 SPECIAL ENVIRONMENTAL REQUIREMENTS FOR ALTUS AFB. (DEC 94)

The following paragraphs describe Altus Air Force Base environmental requirements. Policy letters referenced below may be obtained from the Contracting Office. Reporting shall be coordinated through the Contracting Officer to Altus AFB LG/SEP (phone 580-481-7728 or 5742, Bldg. 228) or CES/CEV (phone 580-481-7605, Bldg. 396) as specified below.

3.13.1 Hazardous Material Registration

Hazardous Material (HM) brought onto Altus AFB shall be registered and shall receive a registration number from LG/SEP. Upon arrival, the registration number shall be applied to its container. After use, the quantity of material used shall be reported to LG\SEP along with the disposition of the container.

3.13.2 Drum Registration

Drums (20, 30, and 55 gallon) (75, 114, and 208 liter), including drums containing non-regulated material, spare part drums, trash drums, etc., shall receive a registration number prior to transportation onto Altus AFB. The registration number and contents shall be written on two sides of the drum with a paint marker. Registration numbers shall be obtained from LG/SEP. Contractors shall comply with Altus AFB Drum Implementation policy letter (paragraph 1, 2, 2b, 2c, 2e, and 3) dated 23 Feb 94, and Altus AFB Drum Policy letter dated 28 Jan 94, paragraph 2, with the exception that empty drums shall not be returned to the base and no new drums will be issued to Contractors. After use, disposition of drum shall be reported to LG/SEP.

3.13.3 Material Safety Data Sheets (MSDS)

MSDS shall be on file prior to use of listed chemical. Contractors shall comply with Altus AFB MSDS policy letter dated 28 Jan 94.

3.13.4 Flammable Storage Lockers

A list of flammable lockers, their contents, any additions or deletion of contents, and location shall be provided to LG/SEP. Contractors shall comply with Altus AFB Flammable Storage Locker policy letter dated 28 Jan 94.

3.13.5 Hazardous Waste Training

Contractors shall provide proof of personnel hazardous waste training to CES/CEV.

3.13.6 Hazardous Waste Reporting

All Hazardous Waste generated on Altus AFB shall be reported to CES/CEV

3.13.7 Toxic Release Inventory

Contractors shall comply with the reporting requirements for "toxic" chemicals under the Emergency Planning and Community Right to Know Act (EPCRA). Contractors shall report quarterly uses of all toxic chemicals that are estimated to exceed the yearly "minimum threshold quantities" contained in the applicable Code of Federal Regulations required under EPCRA, or 5000 pounds 1866 kilograms, whichever is less. Reports shall be provided to the Base not later than five working days after the end of each quarter.

3.13.8 Hazardous Waste Satellite Point Conexes/Lockers

If the Contractor accumulates hazardous waste, as defined by the applicable Code of Federal Regulation, a satellite accumulation point with conex/locker shall be established and CES/CEV notified for instructions and coordination. The accumulation point shall comply with Altus AFB Hazardous Waste Satellite Point Conex letter dated 28 Jan 94, except as noted in paragraph 1f.

3.13.9 Spill Reporting

Spills of hazardous waste, hazardous materials, or non-regulated material such as oils, antifreeze, grease, latex paint, hydraulic fluid, etc., that

contaminates either soil, surface waters, ground water, or air, shall be reported to CES/CEV immediately for reporting purposes to local, State, and/or Federal agencies and proper clean up actions. If spills occur after office hours or during weekends, the Base Fire Department, (phone 405 481-6333) shall be contacted in order that the CES/CEV standby person may be notified.

NOTE: Use the following paragraph for all Sheppard projects. As per Sheppard Ltr date June 30 94, frm Base Civil Engineer (Lt. MIyagawa), Subject "Contractor Requirements".

3.14 SPECIAL ENVIRONMENTAL REQUIREMENTS FOR SHEPPARD AFB. (LTR. DTD
30 JUN 94, FRM SHEPPARD BASE CIVIL ENGR)

The following paragraphs describe Sheppard Air Force Base environmental requirements.

3.14.1 Hazardous Waste and Materials Reporting

The Contractor shall notify the Contracting Officer upon encountering existing unanticipated material on the site which could jeopardize the safety of workers. The Government will be responsible for disposition of the waste if required.

Hazardous materials or waste transported onto or within the Base shall be reported to the Base Fire Department prior to movement on Government property.

3.14.2 Spill Reporting

Upon verification of a release of any petroleum product over one gallon or any other hazardous waste or material, regardless of amount,, the contractor shall notify the Base Fire Department at 911. The Base will determine the cleanup required. Upon release of a petroleum product under one gallon and no threat of fire or explosion exists, the Contractor shall clean the contaminated area to remove all contaminants. Contamination in excess of 100 ppm of Total Petroleum Hydrocarbons shall be removed from the site. Costs of soil tests required as a result of spills shall be the Contractor's responsibility. Contaminated material shall be disposed of properly.

ADDITIONAL NOTES

NOTE A: For additional information on the use of all CWGS, see CWGS-01000 CWGS GENERAL NOTES.

NOTE B: This guide specification has been prepared for use in all Civil Works construction contracts and dredging contracts which affect the dry land surface. The guide will be used to give specific guidance for the elimination or reduction of damage to the environment during and resulting from construction operations in harmony with the letter and spirit of Public Law 91-190, The National Environmental Policy Act of 1969; The Clean Air Act,

42 U.S.C., 7401 et seq., including amendments made by The Clean Air Act Amendments of 1977, PL 95-95; The Federal Water Pollution Control Act, 33 U.S.C., 1251 et seq., including amendments made by The Clean Water Act of 1977, PL 95-217; The Resource Conservation and Recovery Act of 1976, 42 U.S.C., 6901 et seq., and Executive Orders 11514 dated 5 March 1970, as amended by EO 11991, dated 24 May 1977, "Protection and Enhancement of Environmental Quality;" 11593, "Protection and Enhancement of the Cultural Environment, EO 11990, dated 24 May 1977, Protection of Wetlands." Many Civil Works construction contracts contain paragraphs in the technical provisions for specific operations which provide for prevention of pollution. Since the individual sections of the technical provisions are prepared by specialists familiar with problems in their field of activity, the sections should continue to contain specifications for control of pollution when applicable to the operation covered by the section. However, added emphasis will be given to protection of the environment as a major responsibility of the Contractor by including in the technical provisions a separate section devoted exclusively to this subject.

NOTE C: Every effort will be made to eliminate duplication of coverage of items by this section which are covered for another reason in some special provisions. An example of possible duplication is the haul road plan under earth fill provisions and the traffic control plan in this section. The traffic control plan in this section is intended to limit all vehicles to the roads designated for the contractor's use. This plan is intended to aid air pollution control by keeping all vehicles on roads treated to control dust.

NOTE D: These instructions are for information only and will not be included in drafts or specifications submitted for approval.

-- End of Section --